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December 6, 2000

Signature:

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No.:

09/677,679

Art Unit:

2877

Filed:

October 2, 2000

Examiner:

unassigned

Inventor: For:

Stephen D. Fantone, et al.

AUTOMATED OPTICAL MEASUREMENT APPARATUS AND

METHOD

REQUEST FOR CORRECTED FILING RECEIPT

Assistant Commissioner for Patents Office Of Initial Examination **Customer Correction Branch** Washington, D.C. 20231

Sir:

Please find attached a photocopy of the Official Filing Receipt I received for the subject application. I request that the filing receipt be corrected as indicated by the changes marked in "red" on the photocopy to be consistent with the "CROSS REFERENCE TO RELATED APPLICATION" section of the specification and the Declaration. I enclose copies of both of these documents highlighted to support the correct information to be entered on the corrected filing receipt. Thank you for your attention in this matter.

Respectfully submitted,

December 6, 2000

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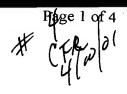
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Enclosures

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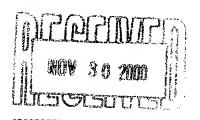


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Francis J Caufield 6 Appllo Circle Lexington, MA 02421-7025



FILING RECEIPT

OC00000005579310

Date Mailed: 11/27/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested c rrections (if appropriate).

Applicant(s)

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Continuing Data as Claimed by Applicant

THIS APPLICATION IS A CIP OF 09/328,972 06/09/1999

WHICH-CLAIMS-BENEFIT OF 60/089,774-06/18/1999

AND CLAIMS BENEFIT OF 60/129,814-04/16/1999

601160,949 10/22/99

Foreign Applications

If Required, Foreign Filing License Granted 11/27/2000

** SMALL ENTITY **

Title

Automated optical measurement apparatus and method

Preliminary Class

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APR - 9 2001



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TITLE: AUTOMATED OPTICAL MEASUREMENT APPARATUS AND METHOD

CROSS REFERENCE TO RELATED APPLICATED.

This application is a Continuation-In-Part of United States Patent Application

1 1999 and also claims priority from United States

1 22 1999, both of No. 09/328,972 filed on June 9, 1999 and also claims priority from United States Provisional Patent Application No. 60/160,949 filed on October 22, 1999, both of which are incorporated by reference herein in their entirety.

BACKGROUND OF THE INVENTION

This invention generally relates to methods and apparatus for testing optical systems and particularly to devices and techniques for the automated measurement of a variety of parameters of optical surfaces and/or elements including radii of curvature, surface shape, thickness, power, focal length, wavefront, topography, and aberrations.

Throughout the process for fabricating optical systems or components, it is frequently necessary to determine if, and how well, optical surfaces or elements conform to their designers stated requirements. Not only does the performance of optical systems in final form need to be verified, but various parameters of their components need to undergo intermediate testing for conformance with their specifications prior to final assembly as a system. Indeed, even the tools of fabrication, especially molds for the formation of plastic or glass lens elements, need to be tested for compliance with design specifications. Some of the most frequently encountered measurements that need to be made are radius of curvature of surfaces in either convex or concave form, surface topography, thickness, power, and various focal lengths.

Classically, radius of curvature is measured through the use of a hand-held instrument called a spherometer, which measures the sagittal height (sag) of the surface over a known diameter and then displays the radius of curvature on a dial or other visual display after an internal calculation that relates radius to sag height and the known diameter. However, the accuracy of such devices are prone to relatively large errors because sag heights are usually small dimensions that are difficult to accurately measure mechanically.